

What is claimed is:

- Sub A1*
1. An ac generator comprising a stator and a rotor:
said stator being disposed within a bracket having an exhaust window
and generating a three-phase ac current by a rotating field of said rotor; and
said rotor comprising a rotor coil for generating a magnetic flux, a pole
core composed of first and second pole core members disposed so as to cover
said rotor coil and having pawl-shaped magnetic poles projecting in staggered
relationship, a plurality of permanent magnets disposed on both side surfaces of
said pawl-shaped magnetic pole for reducing the leakage of the magnetic flux
between the side surfaces of the adjacent pawl-shaped magnetic poles, and a
fan mounted to each of opposite axial ends of the rotor for cooling a heat-
generating member heated due to a generator output current;
said permanent magnets being permanent magnets of samarium-iron
alloy containing Ti and B.
2. The ac generator as claimed in claim 1, wherein said permanent
magnets are plastic magnets made of magnet powder bonded together by a
resin.
3. The ac generator as claimed in claim 1, wherein said permanent
magnets are bonded magnets of $Sm_{8.2} - Fe_{75.6} - Ti_{2.3} - B_{0.9} - N_{13}$.
4. The ac generator as claimed in claim 1, wherein said permanent
magnets are supported by corrosion-resistive holding members surrounding the
magnet.
5. The ac generator as claimed in claim 1, wherein at least one portion
of the side opposing to the pawl-shaped magnetic pole side surfaces of said
permanent magnets is resin-coated.
6. The ac generator as claimed in claim 1, wherein said permanent
magnets are independently attached to each of the magnetic poles of said first
and second pole core members.

7. The ac generator as claimed in claim 1, wherein said first and second pole core members have on their outer circumferences restricting means for restricting the displacement of said magnetic poles in the radial direction due to a centrifugal force during the rotor rotation.

Sub A3
8. The ac generator as claimed in claim 7, wherein said restricting means is disposed in the vicinity of the tips of the magnetic poles of said first and second pole core members to restrict the displacement of said pole tips.

9. The ac generator as claimed in claim 7, wherein said restricting means is a corrosion-resistant annular member circumferentially extending over the entire circumference of said rotor.

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